

**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

**Installation Procedures (IP)
for the
METCAST Client Segment (MCCLNT)
Release 1.7 Series**

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Table of Contents

1	SCOPE	1
1.1	Identification	1
1.2	System Overview	1
2	REFERENCED DOCUMENTS	3
2.1	Government Documents	3
2.2	Non-Government Documents	3
3	SYSTEM ENVIRONMENT	5
3.1	System Requirements	5
3.1.1	Hardware Requirements	5
3.1.2	Operating System Requirements	5
3.1.3	Kernel Requirements	5
3.2	System and Site Preparations.....	5
3.2.1	System Configuration.....	5
3.2.2	Operating System Preparation.....	6
3.2.3	Tape/Disk Preparation.....	6
4	INSTALLATION INSTRUCTIONS	7
4.1	Installation on PC (Windows NT 4.0, XP, 2000, or 98) Systems	7
4.1.1	CD-ROM Booting Procedure for Windows Systems	7
4.1.2	Bootting Procedure for Web Download Version for Windows Systems	8
4.1.3	Installation on Windows Systems	8
4.2	Installation on Sun Solaris Systems.....	9
4.2.1	Remove Old Installations	9
4.2.2	Install METCAST Client, JMV from CD or the Web	10
4.3	Installation of Upgrades.....	11
4.4	Installation Verification	11
4.5	Initializing the Software.....	11
4.6	List of Changes and Enhancements	11

4.7	Important Considerations.....	11
5	NOTES.....	13
5.1	Glossary of Acronyms	13
APPENDIX A	REGIONAL CENTER CONFIGURATION NOTES.....	A-1
A.1	Summary	A-1
A.2	Preliminary Installation Notes.....	A-1
A.3	Installing and Configuring METCAST Client for Regional Center Use.	A-2
A.4	Configuring DAEMON Mode Operation	A-3
A.5	Terminating and Restarting Metcast Client	A-4

1 SCOPE

1.1 Identification

This Installation Procedure (IP) describes the installation of the METCAST Client (MCCLNT) Segment of the METCAST data distribution software, Release 1.7 Series, developed by Fleet Numerical Meteorology and Oceanography Center (FNMOC), Monterey, CA.

The Metcast Client software runs under the following hardware and operating systems:

- Personal Computer (PC) running Microsoft Windows XP, NT 4.0 with Service Pack 6 or higher, Windows 2000, or Windows 98.
- Sun SPARC computer running the Sun Solaris operating system, release 8. The initial release of Metcast 1.7.0.0 does not include a Solaris build.

This document has been developed in accordance with the *DII COE Developer Documentation Requirements, Version 2.0*.

1.2 System Overview

METCAST is a standards-based, request-reply and subscription (channel) system for distributing weather information over the Internet using Hyper-Text Transfer Protocol (HTTP) and Multipurpose Internet Mail Extensions (MIME). The METCAST Client Segment includes a graphical user interface (GUI) to allow the user to select the products to be retrieved and the frequency and types of retrievals, and a retriever process that establishes communication with a METCAST server, submits a request for the data requested, and delivers the reply to the local user. The METCAST Server is comprised of three separate segments, which need not be installed on the same machine as the Metcast Client.

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2 REFERENCED DOCUMENTS

2.1 Government Documents

DDR-2 23 January 1998	<i>Defense Information Infrastructure (DII) Common Operating Environment (COE) Developer Documentation Requirements, Version 2.0, Defense Information Systems Agency, Joint Operability and Engineering Organization</i>
Unnumbered 18 June 1998	<i>Software Requirements Specification for METCAST, Space and Naval Warfare Systems Command, Environmental Systems Program Office (SPAWAR PMW-155), San Diego, CA</i>
MCCLNT.PENTIUM.NT40.1_7_0_0.SVD.doc 20 December 2002	<i>Software Version Description (SVD) for the METCAST Client Segment, release 1.7.0.0</i>
MCCLNT.PENTIUM.NT40.1_7_0_0.UM.doc 20 December 2002	<i>User Manual (UM) for the METCAST Client Segment, release 1.7 Series</i>
MCJMV.PENTIUM.NT40.3_7_0_0.IP.doc 20 December 2002	<i>Installation Procedures (IP) for the Joint METOC Viewer (MCJMV) Segment, release 3.7 Series</i>
MCSRVR.SUN.Solaris28.3_2_0_0.IP.doc 17 August 2001	<i>Installation Procedures (IP) for the METCAST Server (MCSRVR) Segment, Release 3.2</i>
MDMETC.SUN.Solaris28.1_2_0_0.IP.doc 10 August 2001	<i>Installation Procedures (IP) for the METOC Observations Database (MDMETC) Segment, Release 1.2 for Solaris</i>
MDCHNL.SUN.Solaris28.1_2_0_0.IP.doc 10 August 2001	<i>Installation Procedures (IP) for the METOC Channels Database (MDCHNL) Segment, Release 1.2 for Solaris</i>

2.2 Non-Government Documents

None.

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3 SYSTEM ENVIRONMENT

3.1 System Requirements

3.1.1 Hardware Requirements

The METCAST Client segment is hosted on an IBM-Compatible Personal Computer (PC) or a Sun Workstation.

The following configuration is recommended:

- RAM: 128 MB minimum, 512 MB optimum
Available Disk Space: 2 GB

3.1.2 Operating System Requirements

Microsoft Windows NT 4.0 with Service Pack 6 or higher, Windows XP, Windows 2000, Windows 98 or Sun Solaris 8.

3.1.3 Kernel Requirements

Not applicable.

3.2 System and Site Preparations

3.2.1 System Configuration

The appropriate operating system (as described above) must be properly installed prior to loading the METCAST Client segment.

In order to operate properly, METCAST Client requires access to an installed METCAST Server. The server need not be on the same machine as the Client, but must be accessible via the network. METCAST Client is supplied with a configuration that points it to servers at FNMOC.

In order for the data display functions to work properly, the JMV segment must be installed on the same machine as METCAST Client. See the *Installation Procedures for the JMV Segment* referenced in Section 2.1, for details concerning installation of JMV. The Solaris installation will install both the Metcast Client and the Joint METOC Viewer.

3.2.2 Operating System Preparation

Information needed to prepare the operating system is found in the internal documentation for Windows NT 4.0 with Service Pack 6 or higher, Windows XP, Windows 2000, Windows 98, or Sun Solaris 8.

3.2.3 Tape/Disk Preparation

The METCAST Client segment software is delivered on a CD-ROM for the PC hardware environment. It is also available on the World Wide Web at <http://www.fnmoc.navy.mil> under the Software and Manuals link (Restricted Access - password required).

4 INSTALLATION INSTRUCTIONS

The following procedures describe the installation of the METCAST Client Segment software on the various target platforms. Administrator privileges on the installation machine may be required to properly install METCAST Client.

4.1 Installation on PC (Windows NT 4.0, XP, 2000, or 98) Systems

4.1.1 CD-ROM Booting Procedure for Windows Systems

1. Insert the CD-ROM containing the METCAST Client software into the CD-ROM drive. If auto run is turned on for the CD-ROM, the disk will spin and the METCAST Client, JMV and Quick Weather setup program will start automatically. Otherwise:
2. Click on the **Start** button at the lower left side of the screen.
3. Click on **Settings**.
4. Click on **Control Panel**.
5. Click on **Add/Remove Programs**.
6. Ensure the **Install/Uninstall** tab is selected and click on the **Install** button.
7. Click on the **Next** button.
8. The Command Line box in the next dialog should show D:\SETUP.EXE (assuming D is the letter assigned to the CD-ROM drive). If it does, click the **Finish** button to commence installation. When the setup program executes, the METCAST Client and JMV installation screen shown below will appear.



Figure 1. Installation Screen for METCAST Client and JMV.

To install METCAST Client, click on the **Install Metcast Client** button. Proceed to Section 4.1.3.

4.1.2 Booting Procedure for Web Download Version for Windows Systems

1. Using a web browser, go to <http://www.fnmoc.navy.mil>. Level I or II access is required to obtain the software. After logging in, navigate down to the Software and Manuals section in the left-hand menu, then click on the **Software and Manuals** link. On the page showing the available software, click on the yellow Download button for the latest version of METCAST Client 1.7.x.x (x.x being the minor version numbers). Download the installation program to a temporary directory on your hard drive.
2. Close the browser and navigate to the directory where you downloaded the file. Double click on the Metcast Client installation file and follow the directions provided by the installation program.

4.1.3 Installation on Windows Systems

1. Upon execution of the setup file, a Welcome window will appear to start the installation process. Click on the **Next** button.
2. If your network uses a proxy host to communicate across a firewall, a window will appear that shows your current proxy settings. These are automatically read from your Internet Explorer or Netscape settings. If the proxy IP address is correct, click the **Next** button to continue, otherwise, enter the correct address and then click the Next button.
3. A Choose Destination Location window will appear. It is recommended that you click on the **Next** button to accept the default settings. If you must install in a directory other than the default (C:\) ensure that the installation path includes the **\jmvwin** directory, i.e. E:\jmvwin.
4. A Select Components window will appear, prompting you to select one of three different user types by clicking on the appropriate radio button. This step allows the installation program to install a mailcap file that has been optimized for your selected user type. If you are unsure what type of user you are, we suggest that you select the Default, JMV-Only radio button.

NOTE: The mailcap file was substantially changed for this version of Metcast Client. For proper operation, an existing mailcap must be overwritten with the newest mailcap file. The Installation program will search your PC for an existing mailcap file. If one is found, the Select Component window will notify you that it will overwrite the existing mailcap file with the new mailcap file. The Installation program will first save a copy of the existing mailcap file in the noddsls directory. It will be named "mailcap.back.mmddhhmm" (where mm = month, dd = day, hh = hour, and mm = minute) corresponding to the time of the rename. Users who have modified an existing Mailcap file to feed other applications may wish to

manually appended their modifications to the new Mailcap file after the new software has been installed.

Click on the **Next** button to continue.

5. A progress dialog box will appear, which shows the progress of the installation.
6. At the final METCAST Client Installation Completed window, click on the **Finish** button to finish the installation and view the readme.txt file that contains a list of important changes included in this version of the software. You may also click on the **Launch METCAST Client Now** checkbox and click on the **Finish** button if you want to start METCAST Client right away. This completes the installation.
7. Click on the **Exit** button in the METCAST and JMV installation window to close it.

4.2 Installation on Sun Solaris Systems

The following procedure is used to install METCAST Client and JMV on Sun Solaris systems.

Note: If installing METCAST Client for use in a Regional Center configuration, that is, to use the METCAST Client to feed data to a METCAST Server, please refer to Appendix A of this document before proceeding with the installation procedures listed below.

4.2.1 Remove Old Installations

The installation program for the Sun Solaris version of Metcast Client and JMV will search the installation directory (selected by the user) and delete existing versions of Metcast Client and JMV.

IMPORTANT NOTE: Before proceeding with the installation, the user may wish to save various files and directories from a previous version of Metcast or JMV. These files and directories are discussed below.

- **AREA Directories (defined areas).** To avoid having to recreate defined areas that are lost when Metcast and JMV have been uninstalled, the user may wish to save the area directories and then manually append them to the new *jmvwin\noddsfls* directory after the latest software is installed. Area directories are located within the *jmvwin\noddsfls* directory and contain the area definitions as well as any data that has been previously downloaded for that area. Area directories are named with the first eight letters of the area name (e.g. a defined area named NORTHAMERICA would have an associated area directory called NORTHAME).
- **MAILCAP File.** Users who have modified an existing Mailcap file to feed other applications may wish to save this file to a different directory and then manually append the modifications to the new Mailcap file after the new software has been installed.
- **METCAST.CON File (Server configuration file).** The metcast.con file is located within the *jmvwin\noddsfls* directory and contains the server configuration settings that were

previously input by the user. Users who have configured Metcast Client to access multiple servers may wish to save this file to a different directory, and then manually copy it into the new jmvwin\noddsfls directory.

4.2.2 Install METCAST Client, JMV from CD or the Web

METCAST Client and JMV for Solaris are available on CD-ROM or as a web download. In either case, the installation procedure is basically the same.

CD-ROM installation preliminary steps:

1. Insert the CD-ROM in the reader and open it.
2. Double-click on the install.bin program to start the installation.

Web installation preliminary steps:

1. Download the install.bin package.
2. Enter the following command: `chmod u+x install.bin`. This extends execution permission to the program.
3. Enter the command `./install.bin` to start the installation.

After completing the preliminary steps listed above for either the CD-ROM install or the WEB install, the following events will occur:

- A line of text will appear, stating that the system is preparing to start Install Anywhere. It may take several minutes for the first installation window to appear on the screen.
- A **Preparing to Install...** screen will appear while the installation software initializes, then a **METCAST-JMV** install screen will be displayed. Click on the **Next** button to proceed.
- A **Choose Install Folder** dialog window will open, asking the user to select the directory in which to install JMV and METCAST. A default installation directory will be displayed within the text box. You may either accept this location, or may click on the **choose...** button to see a directory tree from which you can choose a directory. Click on the **Install** button to proceed.
- The installation program will search the selected installation directory for existing versions of Metcast and JMV. If existing software is found, it will be removed. A status bar will appear, showing the progress of the installation, followed by a final dialog box when the installation is complete. Click on the **Done** button to exit the installation program.

4.3 Installation of Upgrades

Installation of upgrades will generally follow the same procedures listed above.

4.4 Installation Verification

The Windows NT Add/Remove Programs item under the Control Panel can be used to verify the presence of the software in the directories to which it was installed

4.5 Initializing the Software

No initialization is specifically required. The graphical user interface (GUI) of the METCAST Requester program allows the user to set the addresses of the data servers to be used (defaults are supplied with the installation) and colors for the display, and to select areas for which data are to be retrieved, schedule retrievals, etc. See the *METCAST Client User Manual* referenced in Section 2.1 for details.

4.6 List of Changes and Enhancements

This section is tailored out. A list of changes and enhancements in this release is contained in Appendix B of the *Software Version Description* cited in Section 2.1.

4.7 Important Considerations

This section is tailored out.

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5 NOTES

5.1 Glossary of Acronyms

COE	Common Operating Environment
DII	Defense Information Infrastructure
FNMOCC	Fleet Numerical Meteorology and Oceanography Center
GUI	Graphical User Interface
HTTP	Hyper-Text Transfer Protocol
IP	Installation Procedure
IP	Internet Protocol
METCAST	METOC Broadcast
METOC	Meteorological and Oceanographic
MIME	Multipurpose Internet Mail Extensions
PC	Personal Computer
SRS	Software Requirements Specification
SVD	Software Version Description
T&E	Test and Evaluation
TCP	Transport Control Protocol
UM	User Manual

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APPENDIX A REGIONAL CENTER CONFIGURATION NOTES

A.1 Summary

Regional Center configuration refers to the use of METCAST Client to feed a METCAST Server. Instead of processing data files for viewing with JMV (Joint METOC Viewer), the data files are written to the appropriate directories on a METCAST Server, which are then ingested into the database.

If installing METCAST Client for use in a Regional Center configuration, use the information provided below in conjunction with the Installation Procedures in Section 4.2 of this document.

A.2 Preliminary Installation Notes

Prior to installing the METCAST Client software for use in a Regional Center configuration, the METCAST Server Segments, referenced in Section 2.1, must be installed and the associated directory structure must be configured.

The METCAST Client should be installed by the user **ingest:web**. Login or su to user ingest. Load the Solaris METCAST Client CD into the CD-ROM drive. The installation file, **install.bin**, provided on the CD-ROM is a java script incorporating all the files in the jmvwin directory structure.

The directory **/h/jmvwin** may need to be created by root depending on the protection of /h. The user ingest:web should have full access to the directory /h/jmvwin. Note: The path /h/jmvwin is hardwired into the startup script S99mc_service.

In order to run the installation script and the METCAST Client, the user/shell must have X-windows support. To verify whether X-windows is configured, run xclock by typing **/usr/openwin/bin/xclock &**. A clock face will be displayed if X-windows is supported. Contact your system administrator to configure the X-windows service if it is not present.

The Installation script uses a very basic process, and will overwrite data existing in the jmvwin directory. Therefore, it is important to backup any customized data that exists in that directory (i.e. the mailcap file). Refer to Section 4.2.1 for additional information about various files and directories that the user may wish to save.

If METCAST Client was previously configured to retrieve data from a METCAST server, information about this configuration should be recorded, including the IP address, user name and password, as well as the proxy server configuration.

If installing a new version of METCAST Client over of an existing version of the Client software, the existing METCAST Client must not be running, and all previously defined areas and lists must not be scheduled. This will prevent the unnecessary creation of JMV files when the new METCAST Client software is initialized in Normal Mode.

1. Areas and lists are unscheduled and scheduled within the METCAST Requestor window. If the METCAST Requestor is not running, start it by typing the command:

```
hostname:/h/jmvwin>./metcast
```

Unscheduled all Areas and Lists that are currently scheduled and then shut down the METCAST Requestor by selecting the **Quit** option from the pull down **File** menu. If necessary, refer to Section 5.7 - Scheduling an Area or List, of the METCAST Client Users Manual for instruction.

2. To ensure that METCAST Client is not running. Type the following command:

```
hostname:/h/jmvwin>ps -ef | grep ingest
```

If any processes reference “.../h/jmvwin/noddsfls...”, then the METCAST Retriever Service is running and must be shut down.

Shut down the METCAST Retriever Service by clicking on the **Kill Retriever Service** button in the Retriever Service Window, or by entering the following command:

```
hostname:/h/jmvwin>MCKillService
```

To verify that the METCAST Client has been terminated, enter the command below and confirm that no processes reference “.../h/jmvwin/noddsfls...”

```
hostname:/h/jmvwin>ps -ef | grep ingest
```

A.3 Installing and Configuring METCAST Client for Regional Center Use.

1. To install the METCAST Client software, execute the script **install.bin**, using the following command:

```
hostname:/cdrom/cdrom0/./install.bin &
```

A line of text will appear, stating that the system is preparing to start Install Anywhere. It may take several minutes for the first installation window to appear on the screen. The entire installation process takes approximately five minutes.

2. The key input required during the installation process is to enter the path for the installation. At the “Choose Install Folder” prompt, enter “/h/jmvwin”, overwriting the path to the home directory of the user ingest:web.
3. By default, the METCAST Client installation script loads a mailcap file that is designed for Normal Mode use, that is, to process data files for viewing in JMV. This mailcap file is not suitable for use in a Regional Center Configuration and must be overwritten with a mailcap file designed to write data to the DPSR directories on a METCAST server. To do so, move to the noddsfls directory by typing the following command:

```
hostname:/h/jmvwin>cd noddsfls
```

Type the following command to view a list of other mailcap files that were placed within the noddsfls directory by the installation script.

hostname:/h/jmvwin/noddsfls>**ls mail***

The mailcap file named **mailcap-FED-SUN.mcp** is designed for Regional Center configuration

Copy this mailcap file on top of the existing mailcap file with the following command:

hostname:/h/jmvwin/noddsfls>**cp mailcap-FED-SUN.mcp mailcap**

4. Move to the directory /h/jmvwin and start METCAST Client by typing the following command.

hostname:/h/jmvwin>./metcast

Note: This command starts both the METCAST Requestor and the METCAST Retriever Service in Normal Mode.

A dialog box will appear, which prompts the user to enter a user name, and password for the METCAST Server from which data will be retrieved. Click the OK button and a **Server Configuration** dialog box will open. This dialog box is used to configure the Server settings – such as Server Name, Server URL (IP address), Proxy Settings, etc. Refer to Section 4.1 and 5.2 in the METCAST Client User's Manual for additional instruction if necessary.

5. Upon closing the Server Configuration dialog, the METCAST Requestor Window will open. This window is used to define areas of interest and set up data requests. Areas of interest may be configured at this time, or the user may wait until after setting up DAEMON mode operation. Additionally, if previously defined areas and lists were unscheduled in step 1 of the Preliminary Installation, they may be re-scheduled at this time. Refer to the following sections of the METCAST User's Manual for instruction if necessary: Section 5.3 - Defining, Selecting and Managing Areas, Section 5.4 – Selecting Products for Retrieval, and Section 5.5 – Setting Up Requests, Section 5.6 – Setting Up Lists, and Section 5.7 - Scheduling an Area or List.
6. After configuring and closing the Server Configuration Dialog, the user should confirm that the Catalog (list of available products on a server) has been successfully downloaded. This is accomplished using the METCAST Retriever Monitor. To start the Retriever Monitor, click on the “**Show Retriever Monitor**” button in the Retriever Service window. Refer to Section 5.8.1- Using the Retriever Monitor, in the METCAST Client User's Manual for additional instruction if necessary.

The METCAST Client is now properly configured for Regional Center operation.

A.4 Configuring DAEMON Mode Operation

METCAST Client is typically run in DAEMON mode when installed in a Regional Center configuration. To set up DAEMON mode operation, follow the instructions below.

1. The METCAST Client was started in Normal mode, and must be shut down before it can be configured to run as DAEMON. In the METCAST Requestor window, pull down the **File** menu and select the **Quit** option. This will shut down both the METCAST Requestor and the METCAST Retriever Service.
2. To configure the METCAST Retriever Service to run in “DAEMON” mode, the user must su to root, then copy the file /h/jmvwin/**S99mc_service** to the directory /etc/rc3.d. There are several paths and a user name (Ingest) that are hardwired into this S99 script. The S99mc_service script may be tested by executing the following command which will manually start METCAST Retriever Service in DAEMON mode:

```
hostname:/h/jmvwin>./S99mc_service start
```

(The user will be prompted to enter the password for user ingest).

To verify that the Retriever Service is running in DAEMON mode, enter the command below and verify that one or more processes reference: **.../h/jmvwin/noddsfls....**

```
hostname:/h/jmvwin>ps -ef | grep ingest
```

The METCAST Retriever Service is now running in “DAEMON” mode. From this point on, when the system is rebooted, it will automatically restart the Retriever Service in “DAEMON” mode. Note that while in DAEMON mode, the METCAST Requestor and the METCAST Retriever Monitor must be started manually.

3. Start the METCAST Retriever Monitor by entering the following command:

```
hostname:/h/jmvwin>./MCMonitor
```

The METCAST Retriever Monitor dialog should now display the retrieval status for all active sessions. At a minimum, the retrieval status for the **Catalog** (list of available products on the server) should be present. If Areas of interest were already configured and scheduled, then the retrieval status for those sessions should also be present in the Retriever Monitor.

4. If Areas of interest have not yet been created, you may do so using the METCAST Requestor. Open the METCAST Requestor window by typing the following command:

```
hostname:/h/jmvwin>./MCClient
```

Detailed instructions for configuring Areas of Interest and setting up data requests are provided in the METCAST Client User’s manual. Useful Sections of the User’s Manual are referenced in Step 6 above.

A.5 Terminating and Restarting Metcast Client

To terminate METCAST Client when it is running in DAEMON mode, shut down the METCAST Requestor (if running) and then terminate the METCAST Retriever Service.

1. To shut down the METCAST Requestor: Pull down the **File** Menu in the METCAST Requestor window and select the **Quit** option.
2. To shut down the METCAST Retriever Service: Click on the **Kill Retriever Service** button in the Retriever Service Window, or enter the following command:

```
hostname:/h/jmvwin>./MCKillService
```

To verify that the METCAST Client has been terminated, enter the command below, and verify that no processes reference: **.../h/jmvwin/noddsfls....**

```
hostname:/h/jmvwin>ps -ef | grep ingest
```

To manually restart the METCAST Client Retriever Service in DAEMON mode, enter the following two commands:

1. **MCLoadService** – starts the retriever service in DAEMON mode, and
2. **MCInit** – initializes the service once it has been loaded.

Note: the script **S99mc_service** with the command line argument “**start**”, will execute both scripts.